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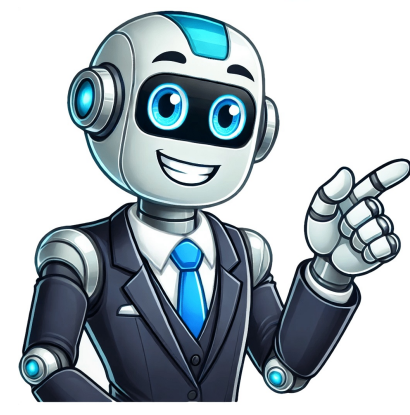






























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Classes of Fire as per NFPA 10 Standard : Fire safety is a critical aspect of our lives, both in residential and commercial settings. To effectively combat fires, it's essential to understand the nature of different fires and how to classify them for the right response. The National Fire Protection Association (NFPA) has established guidelines for classifying fires based on their source and characteristics. In this comprehensive guide, we will delve into the classes of fire as per the NFPA 10 Standard. From ordinary combustibles to flammable metals, we'll explore the various classes, their unique properties, and how to safely tackle them. The NFPA 10 Standard is a globally recognized framework for fire extinguisher selection, installation, maintenance, and use. It defines various classes of fires based on the materials involved and provides guidelines for selecting the appropriate fire extinguisher for each class. Let's dive into each class to gain a deeper understanding. Class A fires involve ordinary combustible materials such as wood, paper, cloth, and plastics. These fires are typically fueled by common materials found in homes and workplaces. To extinguish Class A fires, water-based or multi-purpose fire extinguishers are recommended. Class B fires are fueled by flammable liquids like gasoline, oil, and alcohol, as well as flammable gases like propane and natural gas. Using water on Class B fires can worsen the situation, so foam or carbon dioxide extinguishers are more appropriate. Fires involving live electrical equipment fall into Class C. It's crucial not to use water-based extinguishers on these fires, as the risk of electrical shock is high. Instead, carbon dioxide or dry chemical extinguishers are recommended. Class D fires involve combustible metals such as magnesium, titanium, and sodium. These fires require specialized extinguishing agents, often in the form of dry powder, specifically designed for the metal involved. Class K fires are commonly found in commercial kitchens and involve cooking oils and fats. Wet chemical extinguishers are designed to safely suppress these fires, preventing re-ignition. To effectively combat a fire, it's crucial to correctly identify its class. Misclassifying a fire can be dangerous. Look for visual cues and consider the materials involved before attempting to use an extinguisher. Different fires require different types of fire extinguishers. Understanding which extinguisher to use is vital for successful firefighting. Selecting the right fire extinguisher can make all the difference in an emergency. Factors like location, potential fire hazards, and your level of training should influence your choice. Proper training in fire safety is essential for both individuals and employees in commercial settings. It ensures that everyone knows how to respond in case of a fire emergency. Prevention is the first line of defense against fires. Learn about fire safety measures and practices to reduce the risk of fire incidents. Knowing how to react when a fire breaks out is crucial. Learn the steps to take to protect yourself and others. There are several misconceptions about firefighting that can be dangerous. We'll debunk some of these myths to ensure you have accurate information. Understanding local fire safety regulations is essential for compliance and safety. Stay informed about the rules in your area. In conclusion, understanding the classes of fire according to the NFPA 10 Standard is crucial for effective fire prevention and response. By knowing which fire class you're dealing with and using the appropriate extinguishing methods, you can protect lives and property. Always prioritize safety and be prepared for any fire emergency. Classes of Fire as per British Standard Classes of Fire as per OSHA Classification of Fire and Types of Fire Extinguishers Fire Safety and Emergency Response Fire Sprinkler Systems Why is it essential to use the right fire extinguisher for a specific class of fire? Using the wrong extinguisher can escalate the fire or put you at risk. It's crucial to match the extinguisher to the fire class for effective suppression. Can I use water to extinguish any fire? No, water is not suitable for all fire types. It can be dangerous to use water on electrical fires, flammable liquid fires, or fires involving metals. What is the significance of fire safety training? Fire safety training ensures that individuals know how to respond calmly and effectively during a fire emergency, potentially saving lives. How can I prevent fires in my home or workplace? Fire prevention involves practices like proper storage of flammable materials, regular equipment maintenance, and following safety guidelines. Where can I find information about local fire safety regulations? Local fire departments and government websites are valuable sources of information regarding fire safety regulations in your area. Remember, fire safety is a shared responsibility, and being prepared is the key to minimizing the damage and risks associated with fires. Related NFPA standards from National Fire Protection Association provide guidelines for incorporating fire protection safety measures in industrial systems. Classification of Fire and Hazard as per NFPA - The National Fire Protection Association (NFPA) categorizes fires by class. A fire can be classified among these classes - Class A, Class B, Class C, Class D and Class K. In accordance with NFPA, areas are typically classified as being light (low) hazard, ordinary (moderate) hazard, or extra (high) hazard. Fire Extinguishers - color codes and symbolic representation -In accordance with NFPA 10 (2007 edition), the selection of fire extinguishers depends mainly on the following parameters: type and size of fire most likely to occur, present hazards in the area where the fire is most likely to occur, existence of electrical equipment in close proximity to the area where the fire will most probably occur, ambient temperature conditions, other conditions, such as human presence in the area where the fire is most likely to occur, whether the suspect area is ventilated or not etc. Fire Hydrants -In accordance with NFPA 25, a fire hydrant is a valved connection on a water main having as a purpose to supply water to various fire protection apparatus, fire hose or other. There are four (4) major types of hydrants mainly in use nowadays: Dry Barrel type fire hydrant, Monitor Nozzle fire hydrant, Wall fire hydrant, and Barrel type fire hydrant. Fire Fighting Pumps (centrifugal type) - In accordance with NFPA 20 (2007 edition), fire fighting pumps -shall be specifically designed and listed for fire protection service. Electric motors, diesel engines or even steam turbines (for big pumps) are the acceptable drivers for fire fighting pumps. A fire fighting pump set is selected typically from the following types of pumps:- One (1) 100% motor-driven pump- One (1) 100% diesel-driven pump for redundancy reasons- One (1) jockey or make up pump, usually of vertical type. Jockey pumps are pressure maintenance pumps and their basic role is to cover the various pressure losses of fire fighting network. Fire protection for power generation plants -NFPA 850 provides recommendations (not requirements) for fire protection for fossil fueled (i.e. coal, gas or oil) or alternative fueled (i.e. biomass, solid waste etc) power generation plants. Nuclear power plants or hydroelectric power plants are not covered by NFPA 850- Nuclear power plants standards are addressed by NFPA 805, whereas recommendations for hydroelectric power plants are presented at NFPA 851. List of StandardsStandard NameNFPA 1Fire CodeNFPA 2Hydrogen Technologies CodeNFPA 3Recommended Practice for Commissioning of Fire Protection and Life Safety SystemsNFPA 4Standard for Integrated Fire Protection and Life Safety System TestingNFPA 10Standard for Portable Fire ExtinguishersNFPA 11Standard for Low-, Medium-, and High-Expansion FoamNFPA 11AStandard for Medium- and High-Expansion Foam SystemsNFPA 11CStandard for Mobile Foam ApparatusNFPA 12Standard on Carbon Dioxide Extinguishing SystemsNFPA 12AStandard on Halon 1301 Fire Extinguishing SystemsNFPA 13Standard for the Installation of Sprinkler SystemsNFPA 13DStandard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured HomesNFPA 13ERecommended Practice for Fire Department Operations in Properties Protected by Sprinkler and Standpipe SystemsNFPA 13RStandard for the Installation of Sprinkler Systems in Low-Rise Residential OccupanciesNFPA 14Standard for the Installation of Standpipe and Hose SystemsNFPA 15Standard for Water Spray Fixed Systems for Fire ProtectionNFPA 16Standard for the Installation of Foam-Water Sprinkler and Foam-Water Spray SystemsNFPA 17Standard for Dry Chemical Extinguishing SystemsNFPA 17AStandard for Wet Chemical Extinguishing SystemsNFPA 18Standard on Wetting AgentsNFPA 18AStandard on Water Additives for Fire Control and Vapor MitigationNFPA 20Standard for the Installation of Stationary Pumps for Fire ProtectionNFPA 22Standard for Water Tanks for Private Fire ProtectionNFPA 24Standard for the Installation of Private Fire Service Mains and Their AppurtenancesNFPA 25Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection SystemsNFPA 30Flammable and Combustible Liquids CodeNFPA 30ACode for Motor Fuel Dispensing Facilities and Repair GaragesNFPA 30BCode for the Manufacture and Storage of Aerosol ProductsNFPA 31Standard for the Installation of Oil-Burning EquipmentNFPA 32Standard for Drycleaning FacilitiesNFPA 33Standard for Spray Application Using Flammable or Combustible MaterialsNFPA 34Standard for Dipping, Coating, and Printing Processes Using Flammable or Combustible LiquidsNFPA 35Standard for the Manufacture of Organic CoatingsNFPA 36Standard for Solvent Extraction PlantsNFPA 37Standard for the Installation and Use of Stationary Combustion Engines and Gas TurbinesNFPA 40Standard for the Storage and Handling of Cellulose Nitrate FilmNFPA 42Code for the Storage of Pyroxylin PlasticNFPA 45Standard on Fire Protection for Laboratories Using ChemicalsNFPA 46Recommended Safe Practice for Storage of Forest ProductsNFPA 50Standard for Bulk Oxygen Systems at Consumer SitesNFPA 50AStandard for Gaseous Hydrogen Systems at Consumer SitesNFPA 50BStandard for Liquefied Hydrogen Systems at Consumer SitesNFPA 51Standard for the Design and Installation of Oxygen-Fuel Gas Systems for Welding, Cutting, and Allied ProcessesNFPA 51AStandard for Acetylene Cylinder Charging PlantsNFPA 51BStandard for Fire Prevention During Welding, Cutting, and Other Hot WorkNFPA 52Vehicular Natural Gas Fuel Systems CodeNFPA 53Recommended Practice on Materials, Equipment, and Systems Used in Oxygen-Enriched AtmospheresNFPA 54National Fuel Gas CodeNFPA 55Compressed Gases and Cryogenic Fluids CodeNFPA 56Standard for Fire and Explosion Prevention During Cleaning and Purging of Flammable Gas Piping SystemsNFPA 57Liquefied Natural Gas (LNG) Vehicular Fuel Systems CodeNFPA 58Liquefied Petroleum Gas CodeNFPA 59Utility LP Gas Plant CodeNFPA 59AStandard for the Production, Storage, and Handling of Liquefied Natural Gas (LNG)NFPA 61Standard for the Prevention of Fires and Dust Explosions in Agricultural and Food Processing FacilitiesNFPA 67Guide on Explosion Protection for Gaseous Mixtures in Pipe SystemsNFPA 68Standard on Explosion Protection by Deflagration VentingNFPA 69Standard on Explosion Prevention SystemsNFPA 70National Electrical Code®NFPA 70ANational Electrical Code® Requirements for One- and Two-Family DwellingsNFPA 70BRecommended Practice for Electrical Equipment MaintenanceNFPA 70EStandard for Electrical Safety in the Workplace®NFPA 72National Fire Alarm and Signaling CodeNFPA 73Standard for Electrical Inspections for Existing DwellingsNFPA 75Standard for the Fire Protection of Information Technology EquipmentNFPA 76Standard for the Fire Protection of Telecommunications FacilitiesNFPA 77Recommended Practice on Static ElectricityNFPA 79Electrical Standard for Industrial MachineryNFPA 80Standard for Fire Doors and Other Opening ProtectivesNFPA 80ARecommended Practice for Protection of Buildings from Exterior Fire ExposuresNFPA 82Standard on Incinerators and Waste and Linen Handling Systems and EquipmentNFPA 85Boiler and Combustion Systems Hazards CodeNFPA 86Standard for Ovens and FurnacesNFPA 86CStandard for Industrial Furnaces Using a Special Processing AtmosphereNFPA 86DStandard for Industrial Furnaces Using Vacuum as an AtmosphereNFPA 87Recommended Practice for Fluid HeatersNFPA 88AStandard for 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and Membrane StructuresNFPA 105Standard for Fire Tests of Door Assemblies and Other Opening ProtectivesNFPA 110Standard for Emergency and Standby Power SystemsNFPA 111Standard on Stored Electrical Energy Emergency and Standby Power SystemsNFPA 115Standard for Laser Fire ProtectionNFPA 120Standard for Fire Prevention and Control in Coal MinesNFPA 121Standard on Fire Protection for Self-Propelled and Mobile Surface Mining EquipmentNFPA 122Standard for Fire Prevention and Control in Metal/Nonmetal Mining and Metal Mineral Processing FacilitiesNFPA 123Standard for Fire Prevention and Control in Underground Bituminous Coal MinesNFPA 130Standard for Fixed Guideway Transit and Passenger Rail SystemsNFPA 140Standard on Motion Picture and Television Production Studio Soundstages, Approved Production Facilities, and Production LocationsNFPA 150Standard on Fire and Life Safety in Animal Housing FacilitiesNFPA 160Standard for the Use of Flame Effects Before an AudienceNFPA 170Standard for Fire Safety and Emergency SymbolsNFPA 203Guide on Roof Coverings and Roof Deck ConstructionsNFPA 204Standard for Smoke and Heat VentingNFPA 211Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning AppliancesNFPA 214Standard on Water-Cooling TowersNFPA 220Standard on Types of Building ConstructionNFPA 221Standard for High Challenge Fire Walls, Fire Walls, and Fire Barrier WallsNFPA 225Model Manufactured Home Installation StandardNFPA 230Standard for the Fire Protection of Storage NFPA 231Standard for General Storage NFPA 231CStandard for Rack Storage of MaterialsNFPA 231DStandard for Storage of Rubber TiresNFPA 231ERecommended Practice for the Storage of Baled CottonNFPA 231FStandard for the Storage of Roll PaperNFPA 232Standard for the Protection of RecordsNFPA 232AGuide for Fire Protection for Archives and Records CentersNFPA 241Standard for Safeguarding Construction, Scaffolding, and Demolition OperationsNFPA 251Standard Methods of Tests of Fire Resistance of Building Construction and MaterialsNFPA 252Standard Methods of Fire Tests of Door AssembliesNFPA 253Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy SourceNFPA 255Standard Method of Test of Surface Burning Characteristics of Building MaterialsNFPA 256Standard Methods of Fire Tests of Roof CoveringsNFPA 257Standard on Fire Test for Window and Glass Block AssembliesNFPA 258Recommended Practice for Determining Smoke Generation of Solid MaterialsNFPA 259Standard Test Method for Potential Heat of Building MaterialsNFPA 260Standard Methods of Tests and Classification System for Cigarette Ignition Resistance of Components of Upholstered FurnitureNFPA 261Standard Method of Test for Determining Resistance of Mock-Up Upholstered Furniture Material Assemblies to Ignition by Smoldering CigarettesNFPA 262Standard Method of Test for Flame Travel and Smoke of Wires and Cables for Use in Air-Handling SpacesNFPA 265Standard Methods of Fire Tests for 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Lay-UpNFPA 318Standard for the Protection of Semiconductor Fabrication FacilitiesNFPA 326Standard for the Safeguarding of Tanks and Containers for Entry, Cleaning, or RepairNFPA 328Recommended Practice for the Control of Flammable and Combustible LiquidsNFPA 329Recommended Practice for Handling Releases of Flammable and Combustible Liquids and GasesNFPA 350Guide for Safe Confined Space Entry and WorkNFPA 355Standard for Tank Vehicles for Flammable and Combustible LiquidsNFPA 386Standard for Portable Shipping Tanks for Flammable and Combustible LiquidsNFPA 395Standard for the Storage of Flammable and Combustible Liquids at Farms and Isolated SitesNFPA 400Hazardous Materials CodeNFPA 402Guide for Aircraft Rescue and Fire-Fighting OperationsNFPA 403Standard for Aircraft Rescue and Fire-Fighting Services at AirportsNFPA 405Standard for the Recurring Proficiency of Airport Fire FightersNFPA 407Standard for Aircraft Fuel ServicingNFPA 408Standard for Aircraft Hand Portable Fire ExtinguishersNFPA 409Standard on Aircraft HangarsNFPA 410Standard on Aircraft MaintenanceNFPA 412Standard for Evaluating Aircraft Rescue and Fire-Fighting Foam EquipmentNFPA 414Standard for Aircraft Rescue and Fire-Fighting VehiclesNFPA 415Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading WalkwaysNFPA 418Standard for HeliportsNFPA 422Guide for Aircraft Accident/Incident Response AssessmentNFPA 423Standard for Construction and Protection of Aircraft Engine Test FacilitiesNFPA 424AGuide for Airport/Community Emergency PlanningNFPA 430Code for the Storage of Liquid and Solid OxidizersNFPA 432Code for the Storage of Organic Peroxide FormulationsNFPA 434Code for the Storage of PesticidesNFPA 450Guide for Emergency Medical Services and SystemsNFPA 451Guide for Fire Based Community Healthcare ProvidersNFPA 471Recommended Practice for Responding to Hazardous Materials IncidentsNFPA 472Standard for Competence of Responders to Hazardous Materials/Weapons of Mass 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(Classified) Locations for Electrical Installations in Chemical Process AreasNFPA 498Standard for Safe Havens and Interchange Lots for Vehicles Transporting ExplosivesNFPA 499Recommended Practice for the Classification of Combustible Dusts and of Hazardous (Classified) Locations for Electrical Installations in Chemical Process AreasNFPA 501Standard on Manufactured HousingNFPA 501AStandard for Fire Safety Criteria for Manufactured Home Installations, Sites, and CommunitiesNFPA 502Standard for Road Tunnels, Bridges, and Other Limited Access HighwaysNFPA 505Fire Safety Standard for Powered Industrial Trucks Including Type Designations, Areas of Use, Conversions, Maintenance, and OperationsNFPA 513Standard for Motor Freight TerminalsNFPA 520Standard on Subterranean SpacesNFPA 550Guide to the Fire Safety Concepts TreeNFPA 551Guide for the Evaluation of Fire Risk AssessmentsNFPA 555Guide on Methods for Evaluating Potential for Room FlashoverNFPA 556Guide on Methods for Evaluating Fire Hazard 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Apparatus (SCBA)NFPA 1855Standard for Selection, Care, and Maintenance of Protective Ensembles for Technical Rescue IncidentsNFPA 1858Standard on Selection, Care, and Maintenance of Life Safety Rope and Equipment for Emergency ServicesNFPA 1859Standard on Selection, Care and Maintenance of Protective Operations Vehicle EquipmentNFPA 1875Standard on Selection, Care, and Maintenance of Wildland Fire Fighting Clothing and EquipmentNFPA 1891Standard on Selection, Care, and Maintenance of Hazardous Materials Clothing and EquipmentNFPA 1901Standard for Automotive Fire ApparatusNFPA 1906Standard for Fire Apparatus Maintenance ProgramNFPA 1917Standard for Automotive AmbulancesNFPA 1925Standard on Marine Fire-Fighting VesselsNFPA 1931Standard for Manufacturer's Design of Fire Department Ground LaddersNFPA 1932Standard on Use, Maintenance, and Service Testing of In-Service Fire Department Ground LaddersNFPA 1936Standard on Powered Rescue ToolsNFPA 1937Standard for the Selection, Care, and Maintenance of Rescue ToolsNFPA 1951Standard on Protective Ensembles for Technical Rescue IncidentsNFPA 1952Standard on Surface Water Operations Protective Clothing and EquipmentNFPA 1953Standard on Protective Ensembles for Contaminated Water DivingNFPA 1961Standard on Fire HoseNFPA 1962Standard for the Care, Use, Inspection, Service Testing, and Replacement of Fire Hose, Couplings, Nozzles, and Fire Hose AppliancesNFPA 1963Standard for Fire Hose ConnectionsNFPA 1964Standard for Spray NozzlesNFPA 1955Standard for Fire Hose AppliancesNFPA 1971Standard on Protective Ensembles for Structural Fire Fighting and Proximity Fire FightingNFPA 1975Standard on Emergency Services Work Clothing ElementsNFPA 1976Standard on Protective Ensemble for Proximity Fire FightingNFPA 1977Standard on Protective Clothing and Equipment for Wildland Fire FightingNFPA 1981Standard on Open-Circuit Self-Contained Breathing Apparatus (SCBA) for Emergency ServicesNFPA 1982Standard on Personal Alert Safety Systems (PASS)NFPA 1983Standard on Life Safety Rope and Equipment for Emergency ServicesNFPA 1984Standard on Respirators for Wildland Fire Fighting OperationsNFPA 1986Standard on Respiratory Protection Equipment for Tactical and Technical OperationsNFPA 1987Standard on Combination Unit Respirator Systems for Tactical and Technical OperationsNFPA 1989Standard on Breathing Air Quality for Emergency Services Respiratory ProtectionNFPA 1991Standard on Vapor-Protective Ensembles for Hazardous Materials EmergenciesNFPA 1992Standard on Liquid Splash-Protective Ensembles and Clothing for Hazardous Materials EmergenciesNFPA 1994Standard on Protective Ensembles for First Responders to CBRN Terrorism IncidentsNFPA 1995Standard on Protective Clothing and Ensembles for Emergency Medical OperationsNFPA 2001Standard on Clean Agent Fire Extinguishing SystemsNFPA 2001Standard for Fixed Aerosol Fire Extinguishing SystemsNFPA 2112Standard on Flame-Resistant Garments for Protection of Industrial Personnel Against Flash FireNFPA 2113Standard on Selection, Care, Use, and Maintenance of Flame-Resistant Garments for Protection of Industrial Personnel Against Short-Duration Thermal ExposuresNFPA 2400Standard for Small Unmanned Aircraft Systems (sUAS) used for Public Safety OperationsNFPA 3000Standard for Preparedness and Response to Active Shooter and/or Hostile EventsNFPA 5000Building Construction and Safety Code®NFPA 8501Standard for Single Burner Boiler OperationNFPA 8502Standard for the Prevention of Furnace Explosions/Implosions in Unmanned Burner BoilersNFPA 8503Standard for Pulverized Fuel SystemsNFPA 8504Standard on Atmospheric Fluidized-Bed Boiler OperationNFPA 8505Standard for Stoker OperationNFPA 8506Standard on Heat Recovery Steam Generator Systems Fire extinguishers are designed to release a chemical agent that can deplete fires in their incipient stage, just following ignition. Due to their unequivocal importance, employers are required to provide portable fire extinguishers at their workplace, mounted, located and identified, so that employees can make use of them, in accordance with OSHA's 29 CFR 1910.157.Eliminating a fire at its source before it reaches near-implacable levels is crucial. Therefore, the confidence that fire extinguishers are both readily available and can function reliably is a prime consideration for preventing property loss, injury, and even death. This type of assurance derives from the proper maintenance, inspection, selection, installation, recharging, and testing of portable fire extinguishers, a series of activities that have long been aided by the use of NFPA 10. The current edition of this standard is NFPA 10-2018 - Standard for Portable Fire Extinguishers, 2018 edition. The range of guidelines addressed within NFPA 10-2018 is vast, and each provision comprises the expensive and integral interest of fire prevention. For example, the document states that fire extinguishers, as well as Class D extinguishing agents, should be inspected at least once every month. Overall, NFPA 10-2018 is intended for persons tasked with selecting, purchasing, installing, approving, listing, designing, and maintaining portable fire extinguishers and Class D extinguishing agents, and it offers guidance for interests in relation to these associated but expansive activities so that the fire extinguishers that remain in use are of the utmost quality and can be used appropriately. At the crux of this shared knowledge and guidance is the classification of fires. Different fires result from varying sources, and thus should be handled accordingly. According to NFPA 10-2018, there are five primary classes of fire: Class A: result from ordinary combustible materials, including wood, cloth, paper, and many plastics. Class B: burn in flammable liquids, combustible liquids, petroleum greases, oils, alcohols, and flammable gases. Class C: involve energized electrical equipment. Class D: fires in combustible metals, such as magnesium, titanium, zirconium, sodium, lithium, and potassium. Class K: fires in cooking appliances that involve combustible cooking media, such as vegetable or animal oils and fats. Each class of fire is effectively put out by an extinguisher class with which it correlates, i.e. fire extinguishers with a Class A rating are effective against fires involving paper, wood, and cloth. There is some variation to this, however, as addressed in the NFPA 10-2018 document. Please note that fire extinguishers are a logical part of any fire safety plan or practice, and, therefore, guidelines for their usage and placement are also addressed in other standards developed and published by the National Fire Protection Association (NFPA). Fire extinguishers, at least in some rudimentary form, have been recognized and used as the initial line of defense against erupting flames for centuries, so they've always rewarded their users with some level of safety. However, as with practically everything else produced and standardized, fire extinguishers have expanded in quality as time has progressed. Some of the earliest examples of what would be considered a fire extinguisher simply shot out water. During the past century, throughout which NFPA 10 has been consistently revised, the acceptable materials used for fire extinguishers have shifted and been displaced with the knowledge acquired throughout the years. In fact, NFPA 10-2018 lists any extinguisher manufactured prior to 1955, as well as pressurized water fire extinguishers predating 1971, as obsolete no matter the circumstances. It also includes an assortment of other types in its now-obsolete list, including extinguishers using soda acid, chemical foam, carbon tetrachloride, methyl bromide, and chlorobromomethane (CBM), among others. As the needs for fire extinguishers have changed over the years in response to growing industry needs and an ever-expanding body of knowledge, this standard has undergone changes from the previous revision. Other than the expansion of the standard's scope, NFPA 10-2018 contains the following changes: Clarified provisions for electronic monitoring, obsolete extinguishers, extinguishers installed in areas with oxidizers, extinguisher signs, and extinguisher mounting equipment and cabinets. The maintenance of hose stations that are used in lieu of extinguishers is now addressed. The fire classification marking system is expanded to include markings for extinguishers rated for Class AC and Class AK, while removing information on obsolete equipment. NFPA 10-2018 - Standard for Portable Fire Extinguishers, 2018 edition is available on the ANSI Webstore. Table of content: 1. Classification of fire 2. Fire classification chart 3. Classification of hazards The National Fire Protection Association (NFPA) categorizes fires by class. The relevant graphics and letter designations that accompany these classes are specified by NFPA 10, the standard for portable fire extinguishers. Picture - Symbols used for classification of fire This classification of fire is done based on the combustible material that can possibly catch fire, accordingly the safeguards against such different types of fires can be planned. Class A fires (designation symbol is a green triangle) are the most common and involve ordinary combustible materials like paper, wood and fabrics, rubber. Class A fires are typically slow-burning and leave behind ash when they burn. Most of the times, this type of fire is effectively quenched by water or insulating by other suitable chemical agent. Class B fires (designation symbol is a red square) involve flammable or combustible liquids such as gasoline, oils, greases, tars, paints etc. and flammable gases. Class B fires typically burn very quickly and can be difficult to extinguish. Carbon dioxide, foam, and dry chemical extinguishers are commonly used to extinguish Class B fires. These extinguishing agents work by smothering the fire and cutting off its oxygen supply. Class C fires (designation symbol is a blue circle) involve live electrical equipment like motors, generators and other appliances. Class C fires can be very dangerous because of the risk of electrocution. Water should not be used to extinguish Class C fires because it can conduct electricity and make the situation worse. Carbon dioxide and dry chemical extinguishers are commonly used for this type of fire. These extinguishing agents work by cutting off the oxygen supply to the fire. Class D fires (designation symbol is a yellow decagon) involve combustible metals such as magnesium, sodium, lithium potassium etc. Class D fires are very rare but can be extremely dangerous if they occur. Water should not be used to extinguish Class D fires because it can react with the metal and make the fire worse. Sodium carbonate, graphite, bicarbonate, sodium chloride, and salt-based chemicals extinguish these fires. Class K fires are fires in cooking appliances that involve combustible cooking media (vegetable, animal oils or fats). Class K fires are especially dangerous because they can quickly escalate and spread. Wet chemical extinguishing agents are specifically designed for Class K fires. These agents work by cooling the fire and creating a barrier between the fuel and the oxygen. Clearly the classification of a fire depends on 'what is burning'. That will determine the severity of the fire, heat radiated, reach of the flames, smoke etc. Type of a fire is also a strong determinant of which type of fire extinguisher should be used to put out that fire. The following fire classification chart explains different types of fire extinguishers useful for putting off different types of fire. Following are the main types of fire extinguishers - depending on which fluid is used for putting out the fire. The color code (colored ring at the top of the cylinder) will tell you what type of fire extinguisher you are working with. The National Fire Protection Association (NFPA) classifies fire hazards into three types: light, ordinary, and extra. This classification is based on the combustibility of the material present in an area. Light hazard areas have low quantities of combustible materials and are expected to have fires with moderate rates of heat release. Examples of light hazard areas include: Offices Classrooms Libraries Hospitals Residential areas Meeting rooms Ordinary hazard areas have moderate quantities of combustible materials and are expected to have fires with moderate rates of heat release. Examples of ordinary hazard areas include: Warehouses Retail stores Restaurants Extra hazard areas have high quantities of combustible materials and are expected to have fires with high rates of heat release. Examples of extra hazard areas include: Aircraft hangars Grain elevators Plastics manufacturing facilities Sawmills The NFPA classification system is used to determine the appropriate fire protection measures for a particular area. For example, light hazard areas may only require fire extinguishers, while ordinary hazard areas may require sprinkler systems. Extra hazard areas may require a combination of fire extinguishers, sprinkler systems, and other fire protection measures. The NFPA classification system is an important tool for fire safety professionals. By understanding the fire hazard classification of an area, fire safety professionals can take steps to prevent fires and protect people and property from fire damage. Here is a table that summarizes the NFPA fire hazard classification system: Hazard ClassQuantity of Combustible MaterialsExpected Fire Rate of Heat ReleaseExamplesLightLowLowOffices, classrooms, meeting rooms, libraries, hospitals, nursing homes, residential areasOrdinaryModerateModerateWarehouses, retail stores, restaurants, hotels, motels, factoriesExtraHighHighAircraft hangars, grain elevators, oil refineries, plastics manufacturing facilities, sawmills